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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,774	10/13/2000	Akio Katsube	018976-181	8104

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EXAMINER

COMPTON, ERIC B

ART UNIT PAPER NUMBER

3726

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/689,774

Applicant(s)

KATSUBE ET AL. *cn*

Examiner

Eric B. Compton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 5-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Claims 1-4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

Drawings

2. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 10-11 recite the limitation "the holding jig" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 5-7 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,616,413 to Iliou et al.

Regarding claims 5-7, Iliou et al disclose a method for manufacturing electronic components, comprising: holding a substrate ("substrate" in Figures) on a surface of an elastic material ("conductive adhesive film" in Figures), in which at least the surface of the elastic material is adhesive and conductive, by the strength of the surface; and mounting and electrically connecting an element ("printed circuits" in Figures) on the substrate while surface is held on the surface of the elastic material.

Regarding claim 11, the step of holding is carried out using a jig having a laminate structure comprising: a hard material ("rigid conductive plate") and elastic material (e.g., a conductive epoxide adhesive film).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 9, 10, and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Iliou et al in view of US patent 4,098,945 to Oehmke.

Iliou et al disclose the invention cited above. However, they do not disclose that the elastic material is silicone rubber or is a rubber having a hardness of at least A30.

Oehmke discloses a conductive adhesive elastic material comprising an elastic binder for "peelable adhesive fastening of metallic materials without interruption of the electrical conductive pathways between them" (col 7, lines 62-64). It is disclosed that the conductive material may preferably comprise silicone rubber (see col 6, lines 38-43). Furthermore, it is noted that the "binder should be capable of providing a soft composition having a Shore A hardness of less than about 40" (col 6, lines 34-36). It is also pointed out that a Shore A hardness of greater than 40 is too hard for most applications (cols 1-2, lines 66-1).

Regarding claims 9 and 12, it would have been obvious to one having ordinary skill in the art at the time of invention, to have provided the elastic of Iliou with a rubber having a hardness of at least A30, in light of the teachings of Oehmke, in order to provide an adhesive having a requisite conformability, moldability, and flexibility (col 2, lines 21+).

Regarding claim 10, both Applicant and Oehmke disclose a silicone rubber composition. Applicant notes these composition are stable at 250 °C. Therefore, it is inherent that this composition is stable at this temperature also.

9. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iliou et al in view of Applicant's Admitted Prior Art (AAPA).

Iliou et al disclose the invention cited above. However, they do not specifically disclose how the electronic components are mounted on the substrate.

AAPA notes as on prior art on page 1, lines 22+, of the specification that wire bonding is a known bonding technique using an automated process.

Regarding claim 13, it would have been obvious to one of ordinary skill in the art to manufacture the electronic component of Iliou et al by a wire bonding process, in light of the teachings of AAPA, in order to manufacture electronic components using conventional bonding apparatus known in the art.

10. Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iliou et al in view of JP 11-045912 to MATSUSHITA.

Iliou et al disclose the invention cited above. However, they do not specifically disclose how the electronic components are mounted on the substrate.

Matsushita discloses a method an apparatus for bonding electronic components to substrate. The electronic components are bump bonded to the substrate using ultrasonic waves. The process allows the component to be conductively bonding very firmly (Derwent English Abstract).

Regarding claims 8 and 14, it would have been obvious to one of ordinary skill in the art to manufacture the electronic component of Iliou et al by a bump bonding process using ultrasonic waves, in light of the teachings of Matsushita, in order to

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manufacture electronic components using conventional bonding apparatus known in the art to firmly bond the component to the substrate.

Prior Art References

The prior art references listed on the enclosed PTO-892, but not used in a rejection of the claims, are cited for their teachings of manufacturing electronic parts.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric B. Compton whose telephone number is (703) 305-0240. The examiner can normally be reached on M-F, 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory M. Vidovich can be reached on (703) 308-1513. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

ebc 
December 11, 2002


GREGORY M. VIDOVICH
PRIMARY EXAMINER